Making Canada's Roads the Safest in the World

Transport Canada / Transports Canada

Canada

ROAD SAFETY VISION 2001

2000 UPDATE

CCMTA • CCATM

CANADIAN COUNCIL OF MOTOR TRANSPORT ADMINISTRATORS
CONSEIL CANADIEN DES ADMINISTRATEURS EN TRANSPORT MOTORISÉ

CCMTA is a non-profit organization comprising representatives of the provincial, territorial and federal governments of Canada which, through the collective consultative process, makes decisions on administration and operational matters dealing with licensing, registration and control of motor vehicle transportation and highway safety.

The adoption of Road Safety Vision 2001 by the Canadian Council of Motor Transport Administrators (CCMTA) and the official endorsement of the guiding principles by all Ministers of Transportation and Highway Safety in 1996 represented vitally important steps for Canada's road safety community.

Previous Road Safety Vision reports introduced the program and outlined successful road safety initiatives recently implemented in Canada and other leading countries. This update examines the success of the program to date.

This report also introduces a successor plan — Road Safety Vision 2010 — which was approved by the Council of Ministers responsible for Transportation and Highway Safety in October 2000.

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ROAD SAFETY VISION

2001

Canada's Road Safety Vision is a national undertaking aimed at making Canada's roads the safest in the world. Officially launched in 1996, Vision 2001 is supported by all levels of government as well as by instrumental public and private sector stakeholders. The plan makes use of a broad range of initiatives that focus on road users, roadways and motor vehicles.

Road Safety Vision 2001 initiatives aim to:

- raise public awareness of road safety issues
- improve communication, cooperation and collaboration among road safety agencies
- toughen enforcement measures
- improve national road safety data quality and collection

0 OVERVIEW

CANADA'S CHALLENGE

Motor vehicles help Canadians overcome fundamental features of their country: vast geography and harsh climate. With 900,000 kilometres of roadways, more than 18 million registered vehicles and almost 21 million licensed drivers, Canadians are among the most mobile people on earth. However, there is a heavy price being paid for that mobility. Last year, traffic collisions in Canada claimed the lives of nearly 3,000 road users and injured another 222,000, many of them seriously. Individually, the toll is devastating; collectively, the cost to Canada's health care system is at least $10 billion per year (about 1% of GDP).

THE CANADIAN APPROACH TO ROAD SAFETY: SHARED RESPONSIBILITIES

In Canada, responsibility for road safety is shared among the federal, provincial/territorial and municipal levels of government. The federal government is responsible for new motor vehicle safety standards (the *Motor Vehicle Safety Act*), as well as interprovincial commercial vehicle safety fitness (the *Motor Vehicle Transport Act*). Provinces, territories and municipalities are responsible for highway development and maintenance, commercial vehicle operations, driver and vehicle licensing and the development and implementation of local safety initiatives. Key non-governmental agencies also play an important role in the development and delivery of safety programs.

This multi-tiered approach to road safety has been extremely effective. Collectively, Canadian road safety stakeholders have made great strides toward reducing the carnage. Since the early 1970s, the number of vehicles on Canada's roads has almost doubled, yet the number of traffic fatalities has been cut in half. This remarkable accomplishment is due to a combination of factors, including interventions that focused on getting motorists to buckle up and to refrain from driving after drinking, tougher vehicle safety standards, and improvements in road infrastructure and emergency medical services.

SAFER ROAD TRAVEL SINCE THE VISION'S INCEPTION

Travel on Canadian roads is safer today than in 1996, when Road Safety Vision 2001 was officially launched. The number of road users killed and seriously injured decreased by 4% and 13%, despite steady increases in the number of drivers and vehicles.

Increased mobility has led to staggering casualty figures and enormous health care costs.

Since the early 1970s, the number of vehicles on Canada's roads has almost doubled, yet the number of traffic fatalities has been cut in half.

OVERVIEW

Road safety initiatives of the past 30 years have contributed to steadily declining fatalities and serious injuries.

Canada's level of road safety, as measured by "deaths per registered motor vehicle", improved by 10%. Seat belt use by Canadians, which already ranked among the highest in the world, increased slightly from almost 89% to 90%, and the percentage of fatally injured drivers who had been drinking decreased by 13% over the 1990-1995 baseline period.

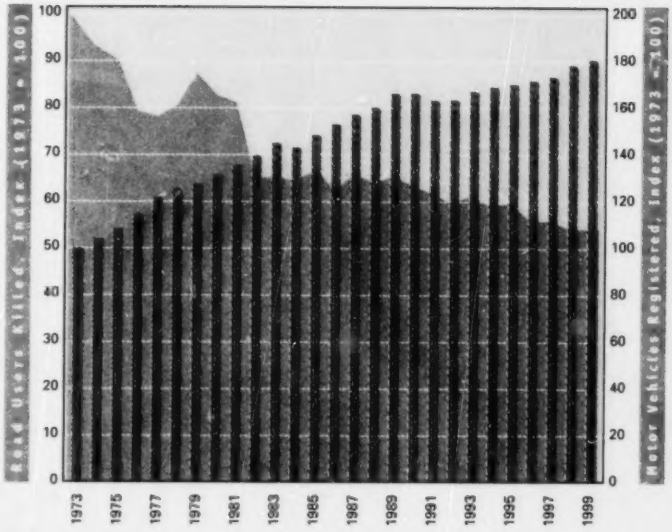
INITIATIVES SUPPORTING ROAD SAFETY VISION 2001

Recent improvements in traffic safety have been achieved with the help of a number of initiatives undertaken in support of the four strategic priorities of Vision 2001:

Raising Awareness

- Operation Impact — an annual event led by the Canadian Association of Chiefs of Police, involving front-line officers from 2,000 police service locations across the country who conduct a one-day blitz to inform motorists of the benefits of proper seat belt and child restraint use and of the dangers of drinking and driving;

Progress has been steady: Fatalities have decreased, while motor vehicle registrations have increased



Road Users Killed • 1973 = 6,706 / 1999 = 2,969
Motor Vehicles Registered • 1973 = 10.2 million / 1999 = 18.4 million

- the adoption of graduated driver licensing systems in many provinces and territories, thereby enabling novice drivers to acquire driving skills gradually in low-risk driving situations;
- campaigns promoting the proper use of child restraints, school bus safety, designated community safety zones and winter driving skills.

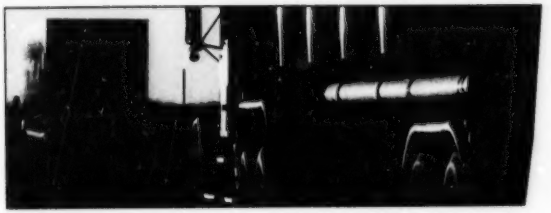
OVERVIEW

Communication, Collaboration, Cooperation

• the creation or enhancement of nationally representative task forces, committees and project groups to address emerging or ongoing road safety issues and to develop and implement initiatives aimed at making road travel safer;

• the partnering of several police and government agencies to develop a pilot project whose mandate is to provide a model for police agencies to better match the use of police resources to target high-risk road user behaviours;

• increased cooperation among all truck and bus stakeholders to strengthen the safety standards that comprise the National Safety Code and improve the safety performance of commercial vehicle transportation.



Enhanced Enforcement

• enhanced government initiatives, police enforcement and fines, and harsher penalties for repeat offenders to deter driving after drinking.

Data Improvements

• the availability of more comprehensive and better quality national traffic collision data, and for the first time, exposure (vehicle kilometrage) data to enable road safety researchers to more readily identify problem areas and develop more timely solutions;

• the emerging development of a national computer- and communications-based system called the System for Technological Applications in Road Safety (STARS), which automates traffic collision and related administrative functions.

Initiatives introduced to support the strategic priorities of Road Safety Vision 2001 have contributed to safer road travel.

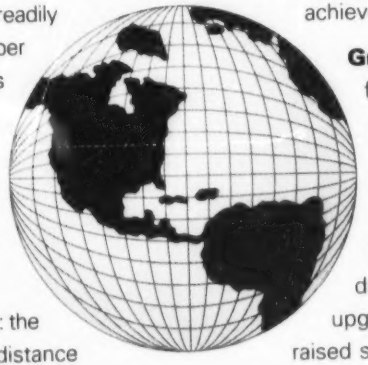
OVERVIEW

CANADA
AND THE WORLD

INTERNATIONAL COMPARISON

The statistic most often used to compare road safety records around the world is the number of road users killed for every 10,000 registered motor vehicles. During 1999, Canada ranked 9th among developed countries, with a fatality rate that was virtually unchanged from 1998.

This comparative statistic was chosen because it is readily available in most countries; however, it poses a number of problems. A single indicator is often deceptive, as characteristics of individual countries can be overlooked. Diverse factors such as country size, population density, economic conditions, road infrastructure, public transport usage, culture, travel patterns and climate all have a profound impact on road casualty statistics.



Most road safety researchers prefer a different statistic: the number of road users killed compared to vehicle distance travelled. This statistic is now available in Canada thanks to the efforts of stakeholders supporting the strategic priorities of Road Safety Vision 2001.

Using this indicator, Canada's international road safety ranking stood at 8th during 1999. Only Australia retained the same road safety ranking on a "deaths per vehicle kilometre" and "deaths per registered motor vehicle" basis. It is evident that some of the world's other "safest countries" are ranked quite differently depending on the rating measure.

AMBITIOUS TARGETS AND INITIATIVES IN OTHER COUNTRIES

Canada is not alone in its efforts to improve its level of road safety. Most countries with top-ranked road safety records have established ambitious long-term targets and have adopted tough interventions to achieve those targets.

Great Britain has established goals for 2010 that call for a 40% decrease in the number of people killed or seriously injured and a 50% reduction in the number of children killed or seriously injured; improved anti-drink-driving and drug-use initiatives; upgraded road infrastructure; raised standards for driver training; enhanced programs for child, motorcyclist and vulnerable road user safety; and undertaken campaigns to reduce speeding.

Sweden has established a 2007 target of 50% fewer fatalities and serious injuries in support of its Vision Zero goal, which calls

Demographic factors and the measure used to compare countries' road safety performance are often major determinants of a country's international ranking.

CANADA AND THE WORLD

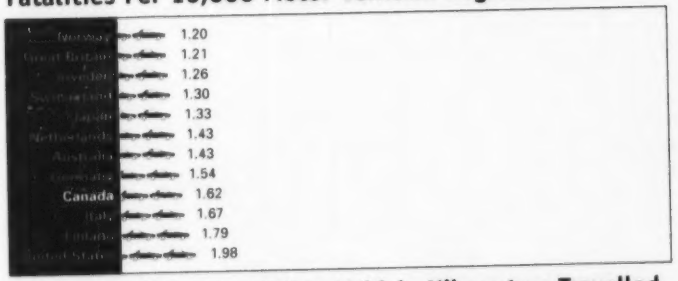
In 1999, Canada's level of road safety, as measured by "deaths per billion vehicle kilometres", ranked 8th among OECD member countries.

Most countries with top-ranked road safety records have adopted ambitious long-term targets to make road travel even safer.

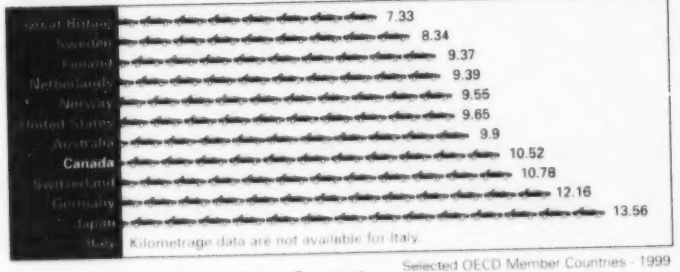
for no one to be killed or seriously injured within the transportation system; introduced programs to promote helmets for cyclists and to reduce speeding and drinking and driving; introduced traffic calming measures, compulsory use of winter tires, and centre guard rails; and removed roadside hazards on selected rural roads.

Finland has a goal to reduce traffic fatalities to no more than 250 by 2005 and to match the percentage decline in serious injuries that occurred during the 1990s; has introduced initiatives to reduce driving after drinking; to identify and eliminate black-spot areas on both urban and rural roads; to remove roadside obstacles and reduce speed limits on rural roads; to build pedestrian and cyclist routes in densely populated areas; and to reduce head-on and run-off-road collisions.

Fatalities Per 10,000 Motor Vehicles Registered



Versus Fatalities Per Billion Vehicle Kilometres Travelled



Selected OECD Member Countries - 1999

Fatalities Per 10,000 Motor Vehicles Registered
Fatalities Per Billion Vehicle Kilometres Travelled

The Netherlands has established targets of 750 or fewer fatalities and 14,000 or fewer hospitalized victims by 2010; has adopted a multifaceted program called Sustainable Road Safety which includes improving traffic law enforcement and road infrastructure, introducing initiatives to reduce drinking and driving, speeding and other dangerous behaviours and enhancing cyclist and heavy vehicle safety.

CANADA AND THE WORLD

Norway has established a target of 200 or fewer traffic fatalities by 2012; is developing new guidelines for reduced speed limits (70 km/h) on roads designated as dangerous; has banned the use of cell phones while driving; lowered the legal BAC limit to 20 mg%; introduced improvements to roads and infrastructure and developed educational programs to improve road user behaviour.

The **United States** has a goal to reduce fatalities and injuries by 20% by 2008 and to reduce fatalities involving commercial vehicles by 50% by 2010; has adopted initiatives to curb drinking and driving, to increase seat belt use, to build safety into transportation infrastructure, to improve emergency medical services, to increase public information and education initiatives directed at high-risk drivers, to target enforcement efforts at red light running, speeding, unsafe lane changing and ignoring rail-highway grade crossing gates; and to introduce technological advancements to augment vehicle handling and stability.

Australia has established a goal to reduce the number of road fatalities per 100,000 population by 40% by 2010; is adopting strategic initiatives to improve road user behaviour, vehicle compatibility, occupant protection, and trauma, medical and rehabilitation services; is introducing initiatives to enhance road safety policies, to use technology to reduce human error and to encourage alternatives to motor vehicle use.

Switzerland's goal for 2010 is 350 or fewer fatalities (Vision Zero objective is no fatalities or serious injuries); has strongly promoted initiatives aimed at increasing the use of seat belts and helmets; has improved road infrastructure and introduced traffic calming measures; has increased public education campaigns and toughened enforcement initiatives, particularly relating to alcohol use; and is introducing legislation to reduce the legal BAC level to 50 mg%.

Germany is focusing (until 2010) on initiatives to decrease the number of crashes involving vulnerable road users, young drivers and heavy goods vehicles as well as collisions that occur on rural roads.

Japan has established a target of at least 1,500 fewer fatalities in 2010 and a 20% reduction in the number of collisions involving commercial vehicles; has prohibited the use of mobile phones while driving; has improved road infrastructure, emergency rescue and medical treatment services; has increased public education programs; developed safety measures based on intelligent transportation systems; and modified its national traffic collision report form to reflect mobile phone and car navigation system use.

CANADA AND THE WORLD

BEYOND 2001

ROAD SAFETY — STILL A CRITICAL PROBLEM IN CANADA

While considerable improvements in road safety have been made, the casualty figures are a grim reminder of the task before us:

Among the 2,969 road users that were killed and 17,500 that were seriously injured in traffic collisions during 1999:

- alcohol was a factor in more than 1,200 fatalities and more than 3,600 serious injuries;
- almost 900 deaths and more than 2,900 serious injuries were attributed to motorists who weren't wearing seat belts;
- approximately 800 road users died and almost 7,500 were seriously injured in collisions at intersections;
- excessive speed contributed to crashes that caused 500 deaths and 2,000 serious injuries; and
- approximately 1,500 motorists were killed and almost 7,400 seriously injured in crashes on rural roads.

It must be noted that crashes often result from a combination of factors. For example, non-use of seat belts and excessive speed are often cited as contributing factors in alcohol-related fatalities. As a result of this double counting, the sum of the above-mentioned figures exceeds the actual number of national fatalities and serious injuries.

ROAD SAFETY VISION 2010: CANADA'S SUCCESSOR PLAN

In October 2000, the Council of Ministers responsible for Transportation and Highway Safety adopted an ambitious extension to the Road Safety Vision initiative. Road Safety Vision 2010 will retain the goal and the strategic priorities of the inaugural program but will also feature a national target for fatality and serious injury reductions as well as an increased number of sub-targets. It is hoped these targets will foster increased stakeholder commitment and new initiatives to help reduce fatalities and meet target objectives.

Notwithstanding the considerable improvements that have occurred during the past 30 years, the same high-risk road user behaviour — drinking and driving, non-use of seat belts and excessive speed — continues to plague Canadian roads.

BEYOND 2001

While 90% of Canadians regularly buckle up, almost 40% of those killed and 20% of those seriously injured did not wear seat belts.

THE NATIONAL TARGET

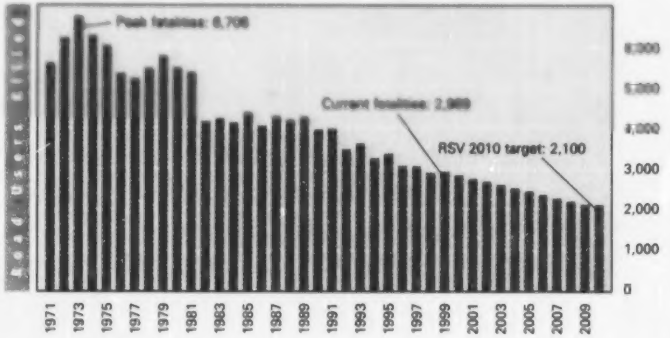
The national target calls for a 30% decrease in the average number of road users killed and seriously injured during the 2008-2010 period (compared to 1996-2001).

SUB-TARGETS

The sub-targets focus on areas where the largest numbers of serious casualties occur and where the greatest potential for reductions exists. They include:

- *minimum seat belt wearing rates of 95% and proper use of child restraints by all motor vehicle occupants.* This enhanced target will now apply to all motor vehicle occupants rather than to passenger vehicle occupants alone (the original target of the National Occupant Restraint Program 2001 initiative).
- *a 40% decrease in the number of unbelted fatally or seriously injured occupants.* While annual seat belt use surveys suggest that nine of ten Canadians wear seat belts on a regular basis, almost 40% of occupants killed and 20% of those seriously injured had not buckled up.

Current traffic fatality totals are less than half their peak... Road Safety Vision 2010 seeks to accelerate this trend

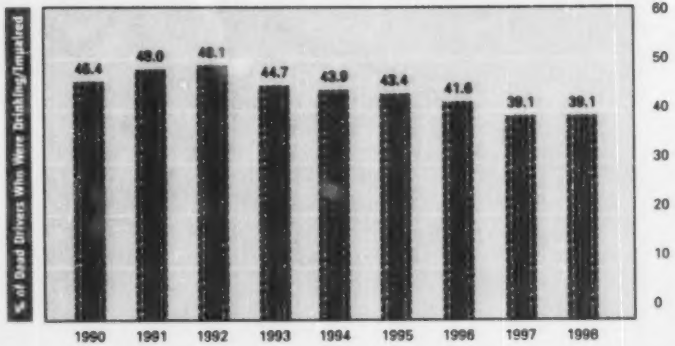


- *a 40% decrease in the percentage of road users fatally or seriously injured in crashes involving alcohol.* Driving after drinking is no longer socially acceptable. Increased enforcement, stiffer penalties and focused awareness campaigns have had some success in deterring hard-core drinking drivers.

Victim Type	% Unbelted 1994-1998 Average	% Unbelted 1999
Drivers Killed	38.7	37.0
Drivers Seriously Injured	17.1	16.9
Passengers Killed	40.4	41.5
Passengers Seriously Injured	24.6	24.0
Children Killed (0-4 yrs.)	23.0	6.7
Children Seriously Injured	15.2	16.5

BEYOND 2001

Despite an increase in the number and severity of drink-driving interventions, progress has been slow



• *a 20% reduction in the percentage of road users killed or seriously injured in speed- and intersection-related crashes.* Approximately one in four road user fatalities occurs in an intersection-related crash. Practices such as excessive speed and running red lights are often cited as contributing factors.

• *a 20% decrease in the percentage of drivers who commit three high-risk driving infractions (two if they are alcohol-related) within a two-year time frame.* In an effort to curtail this behaviour, road safety stakeholders in all jurisdictions are introducing measures to identify drivers who drink and drive regularly, do not wear seat belts, speed, run red lights and commit other dangerous driving infractions. It is hoped that these high-risk driver profiles will facilitate the development and introduction of successful interventions.

• *a 20% decrease in the number of young drivers/riders (those aged 16-19 years) killed or seriously injured in crashes.* Despite the introduction of graduated licensing schemes in many jurisdictions, young drivers are still over-represented in the statistics for serious crashes. Although they account for less than 5% of the licensed driver population, they represent almost 9% of drivers killed and more than 11% of those seriously injured.

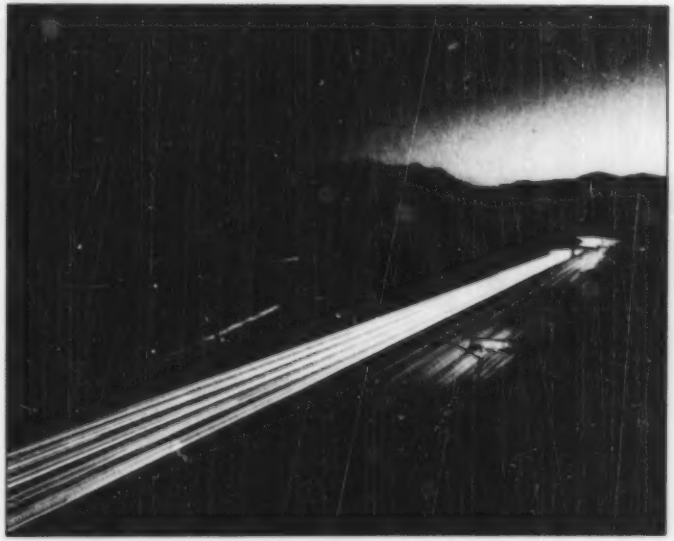
Approximately 70% of fatally injured impaired drivers had BACs that were more than twice the legal limit.

Rescue officer assisting collision victim.

BEYOND 2001

• *a 20% decrease in the number of road users killed or seriously injured in crashes involving commercial vehicles.* The National Safety Code standards form the basis for commercial bus and truck safety in Canada. These standards, which address issues such as cargo securement, hours of service for drivers and carrier safety ratings, have served to offset the substantial increase in commercial truck activity over the past five years, so that fatalities and serious injuries involving these vehicles have remained relatively constant. Still, approximately 600 road users die and almost 1,800 are seriously injured every year in crashes involving commercial carriers. Most of these victims were in passenger vehicles, not in the commercial vehicles. Initiatives that focus on educating motorists on safe vehicle operation near commercial carriers are being considered.

• *a 30% decrease in the number of vulnerable road users (pedestrians, motorcyclists and cyclists) killed or seriously injured.* Although vulnerable road users annually account for more than 600 fatalities and 3,500 seriously injured road users, national initiatives aimed at making travel safer for these road users do not currently exist.



BEYOND 2001

Many services are called upon during rescue efforts

• *a 40% decrease in the number of road users fatally or seriously injured on rural roadways.* Almost half of all fatalities and approximately 40% of all serious injuries occur on rural roadways with posted speed limits of 80-90 km/h. Increased education and awareness of rural road safety issues, improvements in road and vehicle design, enhancements to emergency medical services as well as targeted enforcement will all figure prominently in reducing casualties on rural roadways.

In addition to the introduction of the new quantitative targets, the successor plan also recommends the adoption of graduated licensing schemes, innovative community policing protocols, and public education campaigns to promote safe cycling. The plan also calls for improvements in the capture and linkage of data on crashes and exposure.

While the targets focus primarily on road users, improving Canada's overall level of road safety will also require improvements to vehicles and to road networks. Efforts by vehicle and road safety experts will have a strong impact on the degree of success achieved by Road Safety Vision 2010.

BEYOND 2001

The targets supporting Road Safety Vision 2010 are both ambitious and attainable.

Current efforts by Transport Canada to improve motor vehicle safety regulations focus on frontal-crash and lateral-impact protection, commercial trailer rear underride safety, new child seat attachment requirements and bus occupant protection.

Technological advancements that improve the safety of motor vehicle operation and help motorists avoid collisions are also beginning to enter the marketplace. Intelligent Transportation Systems (ITS) that make use of on-board computers can activate brakes, steering and throttle without driver input. Advanced systems such as adaptive cruise control and night vision are currently offered on some new models. The next generation of systems will include adaptive lane-departure warning and control and obstacle avoidance devices. All these developments have the potential to reduce the number of motor vehicle crashes in the future.

Recent revisions to the *Geometric Design Guide for Canadian Roads*, which incorporates explicit safety considerations into road design, will make roads safer to travel on.

Within the framework of the Transportation Association of Canada, national guidelines are currently being developed for road safety audits, a management process that ensures that all safety issues are addressed during the design phase. Guidelines are also being developed for continuous rumble strips — grooved patterns stamped into the edge of the asphalt — which alert drivers that they are about to leave the roadway. Guidelines on road resurfacing, rehabilitation, restoration and reconstruction (3R/4R) are also being developed to enhance the safety of existing roads. Future efforts to make roads safer will exploit advanced technologies such as Geographic Information Systems (GIS) to incorporate more precise crash site information into the design process.

BEYOND 2001

THE DECADE AHEAD

Canadian road safety stakeholders face a significant challenge in meeting these targets, though recent trends offer encouragement. Fatalities fell by 29% between 1987-1989 and 1997-1999.

The establishment of targets has proven effective in many countries, most notably Australia and Great Britain. These countries, which have recently established new goals, have seen the benefits that often flow from targets: enhanced collaboration, broader public acceptance, increased political commitment, more effective programs and, ultimately, substantially reduced fatalities and serious injuries.

Initiatives carried out in support of the four strategic priorities of Road Safety Vision 2001 not only resulted in reductions in the number of fatalities and injuries, but also served to heighten awareness of key road safety issues among stakeholders as well as the general public. Making Canada's roads the safest in the world is an ambitious but well justified goal, given the enormous societal costs that road crashes impose on Canadians. The targets supporting Road Safety Vision 2010, although equally ambitious, can be achieved through the enhancement of successful existing programs and the development and implementation of new measures which focus on the areas of greatest concern.

A new time frame has been established for the Vision. The targets have been set. Now is the time for all road safety stakeholders to renew our efforts to make Canada's roads the safest in the world.

BEYOND 2001

To find out more about national road safety programs and initiatives, call Transport Canada toll free at 1-800-333-0371 or (613) 998-8616 if you are calling from the Ottawa area, or e-mail comments or questions to roadsafetywebmail@tc.gc.ca. You can also visit the Transport Canada Web site at www.tc.gc.ca/roadsafety

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Driver Safety, Research & Traffic Safety Initiatives • Alberta Infrastructure
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Traffic Safety Programs • Insurance Corporation of British Columbia
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Driver & Vehicle Licensing • Department of Transportation and Government Services
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